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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,038	11/06/2003	Kouichi Katou	P21-163397M/YS	9362

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EXAMINER

BOSWELL, CHRISTOPHER J.

ART UNIT	PAPER NUMBER
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3676

MAIL DATE	DELIVERY MODE
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08/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/702,038

Applicant(s)

KATOU ET AL.

Examiner

Christopher Boswell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-12 and 21-26 is/are rejected.
- 7) ☒ Claim(s) 3,4 and 13-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/1/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

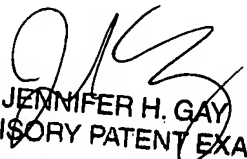
In view of the appeal brief filed on March 27, 2007, PROSECUTION IS HEREBY REOPENED. A new rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:


JENNIFER H. GAY
SUPERVISORY PATENT EXAMINER

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being unclear to the usage of the word “communicates” in line 13 and line 6, respectively. The examiner is unclear as to what is being communicated between the containing groove and the cam groove or how the containing groove communicates with the cam groove.

Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite due to the limitation of “a cylindrical portion.” The examiner is unclear as to what component has the aforementioned cylindrical portion, as the claim currently reads, the cylindrical portion could be on the cam member or the engagement holes.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,120,069 to Taranto, in view of U.S. Patent Number 5,516,163 to Baker.

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Taranto discloses the invention substantially as claimed. Taranto discloses a lock apparatus for attaching a container member to a support member openably, the lock apparatus comprising an operation handle (16), a spring (28) which is movably supported by the container member, a slide pin (26) which is urged in a direction of a lock hole defined on the support member by the spring, respectively (figure 4), and a cam member (30) to which a rear end portion of the slide pin is fitted, to urge the each slide pin to project and retract (column 3, lines 33-39), and when the operation handle is operated in a swing manner, a front end portion of the each slide pin is retracted from the each lock hole of the support member against pressure of the each spring (column 2, lines 58-64), and a cam groove on the cam member (the intersection between the ramp on the triangular element on the cam member and the flat surface of the cam member), as in claim 1. However, Taranto does not disclose an o-ring on the cam member.

Baker teaches of an O-ring (2) disposed within a latch assembly (figure 3), the latching device comprising a user actuated component (1A and 1B), an exterior housing (3), an actuating device (5) and a latch bolt (12), by means of a containing groove (the groove established at the intersection between the interior knob and the spindle receptacle; figure 8) that isolates the O-ring between the knob and the exterior housing of the latch, as in claim 7, in the analogous art of latch assemblies having linear movement of the actuating device for the purpose of reducing noise and softening impact between the user actuated component and the housing (column 4, lines 10-11). It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate an O-ring, as taught by Baker, in to the lock apparatus of Taranto where the O-ring would reside in a groove established between the cylindrical portion of the cam member and the polygonal portion of the cam member, where the cam groove is able to

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communicate to the groove containing the O-ring via the flat surface of the cam member, additionally the O-ring would contact the retaining structure (the ears that extend in an orthogonal direction to the movement of the slide pins) of the latch assembly in order to reduce noise and soften impact between the cam member and the retaining structure of the latch assembly.

Taranto also discloses the rear end portion of the slide pin is connected to the cam member to be swingable (column 3, lines 33-39), as in claim 2, as well as a projected portion (the triangular element projecting from the cam member) on the outer cylindrical member, wherein the projected portion moves in the cam groove and the cam groove is on the cylindrical portion of the cam member groove (figure 3), as in claims 8 and 9.

Claims 10-12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taranto, in view of Neumann et al., and in further view of Baker.

Taranto discloses a lock apparatus for attaching a container member to a support member openably, the lock apparatus comprising an operation handle (16), a spring (28) which is movably supported by the container member, a slide pin (26) which is urged in a direction of a lock hole defined on the support member by the spring (figure 4), and a cam member (30) to which a rear end portion of the slide pin is fitted, to urge the each slide pin to project and retract (column 3, lines 33-39), and when the operation handle is operated in a swing manner, a front end portion of the each slide pin is retracted from the each lock hole of the support member against pressure of the each spring (column 2, lines 58-64), an engagement groove (62) are

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defined on opposed surfaces of a front end portion of the cam member having a cylindrical portion (figure 4), a rear end portion (40) of the slide pin is formed in a bifurcated structure (48) comprising elastic pieces, each of said elastic pieces comprises a protrusion (64 and 65) for detachably engaging with the engagement holes, and rotation of said slide pin with respect to the cam member disengages the protrusions from the engagement holes (column 3, lines 57-62), as in claims 10-12. However, Taranto does not disclose engagement holes. Neumann et al. teach of a connections means between a male connector (34), having a bifurcated structure comprising elastic pieces (40), that engages a female connector (32), that has two engagement holes (44) defined on opposed surfaces of the female connector (column 4, lines 42-47) in the analogous art of connections utilizing resilient latching members for the purpose of strongly resisting relative rotation between the components. It would have been obvious to one with ordinary skill in the art at the time the invention was made to substitute the connection means between the cam member and the slide pins of Taranto with the connection means of Neumann et al., such that the slide pin would incorporate the bifurcated structure and the cam member would incorporate the engagement holes in order to strongly resist relative rotation between the cam member and the slide pins.

Furthermore, Taranto also does not disclose an o-ring on the cam member. Baker teaches of an O-ring (2) disposed within a latch assembly (figure 3), the latching device comprising a user actuated component (1A and 1B), an exterior housing (3), an actuating device (5) and a latch bolt (12), by means of a containing groove (the groove established at the intersection between the interior knob and the spindle receptacle; figure 8) that isolates the O-ring between the knob and the exterior housing of the latch, as in claim 7, in the analogous art of latch

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assemblies having linear movement of the actuating device for the purpose of reducing noise and softening impact between the user actuated component and the housing (column 4, lines 10-11). It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate an O-ring, as taught by Baker, in to the lock apparatus of Taranto where the O-ring would reside in a groove established between the cylindrical portion of the cam member and the polygonal portion of the cam member, where the cam groove is able to communicate to the groove containing the O-ring via the flat surface of the cam member, additionally the O-ring would contact the retaining structure (the ears that extend in an orthogonal direction to the movement of the slide pins) of the latch assembly in order to reduce noise and soften impact between the cam member and the retaining structure of the latch assembly.

Taranto also discloses the slide pin swings about an axis that is substantially perpendicular to an elongate axis of said slide pin (figures 3-6), as in claim 21.

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taranto, in view of Baker, as applied above, and in further view of Neumann et al.

Taranto and Baker disclose the invention substantially as claimed. Taranto and Baker disclose an engagement groove (62) is defined on opposed surfaces of a front end of the cam member (figure 4) having a cylindrical portion, as in claim 22, where the rear end portion of the slide pin is formed in a bifurcated structure (figure 4) comprising elastic pieces (62 and 64), as in claim 23, and where the elastic pieces comprise a protrusion for detachably engaging with the engagement groove (figure 4), as in claim 24. However, Taranto and Baker do not disclose

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engagement holes. Neumann et al. teach of a connections means between a male connector (34), having a bifurcated structure comprising elastic pieces (40), that engages a female connector (32), that has two engagement holes (44) defined on opposed surfaces of the female connector (column 4, lines 42-47) in the analogous art of connections utilizing resilient latching members for the purpose of strongly resisting relative rotation between the components. It would have been obvious to one with ordinary skill in the art at the time the invention was made to substitute the connection means between the cam member and the slide pins of Taranto, as modified by Baker, with the connection means of Neumann et al., such that the slide pin would incorporate the bifurcated structure and the cam member would incorporate the engagement holes in order to strongly resist relative rotation between the cam member and the slide pins.

Claims 25 and 26 and rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,120,069 to Taranto, in view of U.S. Patent Number 6,854,919 to Neumann et al.

Taranto discloses a lock apparatus for attaching a container member to a support member openably, the lock apparatus comprising an operation handle (16), a spring (28) which is movably supported by the container member, a slide pin (26) which is urged in a direction of a lock hole defined on the support member by the spring (figure 4), and a cam member (30) to which a rear end portion of the slide pin is fitted, to urge the each slide pin to project and retract (column 3, lines 33-39), and when the operation handle is operated in a swing manner, a front end portion of the each slide pin is retracted from the each lock hole of the support member

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against pressure of the each spring (column 2, lines 58-64), an engagement groove (62) is defined on a front end portion of the cam member, where the cam member has a cylindrical portion (figure 4), a rear end portion (40) of the slide pin is formed in a bifurcated structure (48), each of said elastic pieces comprises a protrusion (64 and 65) for detachably engaging with the engagement holes, and rotation of said slide pin with respect to the cam member disengages the protrusions from the engagement holes (column 3, lines 57-62), as in claims 25 and 26.

However, Taranto does not disclose engagement holes. Neumann et al. teach of a connections means between a male connector (34), having a bifurcated structure comprising elastic pieces (40), that engages a female connector (32), that has two engagement holes (44) defined on opposed surfaces of the female connector (column 4, lines 42-47) in the analogous art of connections utilizing resilient latching members for the purpose of strongly resisting relative rotation between the components. It would have been obvious to one with ordinary skill in the art at the time the invention was made to substitute the connection means between the cam member and the slide pins of Taranto with the connection means of Neumann et al., such that the slide pin would incorporate the bifurcated structure and the cam member would incorporate the engagement holes in order to strongly resist relative rotation between the cam member and the slide pins.

Allowable Subject Matter

Claims 3-4 and 13-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The claims are allowable over the prior art of record because the teachings of the references taken as a whole do not teach or render obvious the combination set forth, including that of a stopper piece between the elastic pieces of the slide pin.

Response to Arguments

Applicant's arguments, see appeal brief, filed March 27, 2007, with respect to claims 1-2, 5-12, 21-26 have been fully considered and are persuasive. The rejection of claims 1-2, 5-12, 21-26 has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Taranto, and combinations with Baker and Neuman et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Boswell whose telephone number is (571) 272-7054. The examiner can normally be reached on 9:00 - 4:00 M-F.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Gay can be reached on (571) 272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Christopher Boswell
Examiner
Art Unit 3676

CJB 
August 8, 2007


JENNIFER H. GAY
SUPERVISORY PATENT EXAMINER